

Claims

1. An apparatus for supplying power comprising:

a switching section for controlling an output of a direct current voltage
5 source inputted from external;

a power transforming section for converting the direct current voltage source
from the switching section into an alternating current voltage source and
transforming the alternating current voltage source;

a control section for outputting a switching signal so as to control an output
10 of a constant current supplied to a lamp unit in response to a dimming signal
inputted from an external;

a sensing section for sensing variation of the alternating current voltage
source supplied to the lamp unit; and

a detecting section for comparing a sensing signal provided from the sensing
15 section with a predetermined reference signal to output a detecting signal to the
control section, thereby maintaining the constant current to be supplied to the lamp
unit.

2. The apparatus of claim 1, wherein the sensing section senses
20 variations of current and voltage of the alternating current voltage source supplied to
both end terminals of the lamp unit.

3. The apparatus of claim 2, wherein the sensing section comprises a coil
shape.

25 4. The apparatus of claim 1, wherein the power transforming section
comprises a transformer having a primary winding and a secondary winding, for

transforming the alternating current voltage source and the sensing section is disposed adjacent to the secondary winding of the transformer.

5. A backlight assembly comprising:

5 a lamp driving section for converting a direct current voltage source inputted from an external into an alternating current voltage source and transforming the converted alternating current voltage source;

10 a light emitting section for emitting a light in response to the transformed alternating current voltage source, the light emitting section having a lamp unit that receives a high voltage of an alternating current voltage source through at least one end terminal; and

a light control section for increasing a brightness of the light,
wherein the lamp driving section comprises:

15 a control section for outputting a switching signal so as to control an output of a constant current supplied to the lamp unit in response to a dimming signal inputted from an external, the control section being operated in response to on and/or off signals from the external;

a switching section for controlling an output of a direct current voltage source in response to the switching signal;

20 a power outputting section for converting the direct current voltage source from the switching section into the alternating current voltage source, transforming the converted alternating current voltage source into an alternating current voltage source having a constant voltage to provide the alternating current voltage source having the constant voltage to the lamp unit;

25 a sensing section for sensing variation of the alternating current voltage source supplied to the lamp unit; and

a detecting section for comparing a sensing signal provided from the sensing

section with a predetermined reference signal to output a detecting signal to the control section, thereby maintaining the constant current to be supplied to the lamp unit.

5 6. The backlight assembly of claim 5, wherein the lamp unit comprises an external electrode fluorescent lamp having two electrodes, at least one electrode of the two electrodes being disposed on outer surface thereof.

10 7. The backlight assembly of claim 6, wherein the lamp unit comprises a plurality of external electrode fluorescent lamps connected to each other in parallel.

 8. The backlight assembly of claim 7, wherein the sensing section is connected to each of the external electrode fluorescent lamps.

15 9. The backlight assembly of claim 8, wherein the number of the detecting section is equal to that of the sensing section.

20 10. The backlight assembly of claim 5, wherein the power outputting section comprises a transformer having a primary winding and a secondary winding, for boosting the converted alternating current voltage source and the sensing section senses the sensing signal from the secondary winding of the transformer.

25 11. The backlight assembly of claim 10, wherein the sensing section comprises a coil shape.

 12. The backlight assembly of claim 10, wherein the sensing section is disposed adjacent to the secondary winding of the transformer, senses a voltage

based on an electric field induced in response to a power of the secondary winding and provides the sensed voltage to the detecting section.

13. The backlight assembly of claim 5, wherein the power outputting section provides a constant voltage of the transformed alternating current voltage source to both end terminals of the lamp unit, the constant voltage having positive and negative polarity levels equal to each other.

14. The backlight assembly of claim 5, wherein the power outputting section provides a constant voltage of the transformed alternating current voltage source to both end terminals of the lamp unit, the constant voltage having differences between a highest level and a lowest level of the transformed alternating current voltage source equal to each other.

15. The backlight assembly of claim 15, wherein the lamp driving section further comprises a diode having a cathode connected to an output terminal of the switching section and an anode connected to a ground, for blocking a rush current from the power outputting section to the switching section.

16. The backlight assembly of claim 5, wherein the lamp driving section further comprises a switching device driving section for amplifying a signal so as to adjust a level of the alternating current voltage source provided from the control section and providing the amplified signal to the switching section.

17. An LCD apparatus comprising:
a backlight assembly having a lamp driving section for converting a direct current voltage source inputted from an external into an alternating current voltage

source and transforming the converted alternating current voltage source; a light emitting section for emitting a light in response to the transformed alternating current voltage source, the light emitting section having a lamp unit that a plurality of external electrode fluorescent lamps are connected to each other in parallel, each
5 of the external electrode fluorescent lamps having at least one external electrode that receives a high voltage of an alternating current voltage source; and a light control section for increasing a brightness of the light provided from the light emitting section; and

10 a display unit disposed on the light control section, for receiving the light from the light emitting section through the light control section and displaying an image,

wherein the lamp driving section comprises:

15 a control section for outputting a switching signal so as to control an output of a constant current supplied to the lamp unit in response to a dimming signal inputted from an external, the control section being operated in response to on and/or off signals from the external;

a switching section for controlling an output of a direct current voltage source in response to the switching signal;

20 a power outputting section for converting the direct current voltage source from the switching section into the alternating current voltage source, transforming the converted alternating current voltage source into an alternating current voltage source having a constant voltage to provide the alternating current voltage source having the constant voltage to the lamp unit;

25 a sensing section for sensing variation of the alternating current voltage source supplied to the lamp unit; and

a detecting section for comparing a sensing signal provided from the sensing section with a predetermined reference signal to output a detecting signal to the

control section, thereby maintaining the constant current to be supplied to the lamp unit.